



ACADEMY CONDOLES THE DEATH OF SHRIMATI INDIRA GANDHI

Shrimati Indira Gandhi had been the most important personality, dominating the political scene of India for the last two decades. She possessed a multifaceted personality and inspired the leaders and doyens in most of the fields to put forth their best for undertaking and completing developmental activities. She symbolised and projected the image of an integrated and progressive India. The scientific community regarded her as its most ardent supporter since she was a protagonist of scientific temper. All scientific organizations, and academies and societies requested her presence at the inauguration of major scientific conferences or annual sessions. As long as she was the Prime Minister, she inaugurated the session of the Indian Science Congress every year. In spite of her extremely busy schedule she usually had time to meet eminent scientists, both from within India and from other countries.

The Indian National Science Academy was fortunate that she inaugurated the Golden Jubilee celebrations of this premier scientific body on January 16, 1984 at Vigyan Bhawan, New Delhi. The proceedings of the celebrations published recently include some colour photographs of the ceremony, of her awarding plaques to Foundation Fellows, Past Presidents of the Academy and representatives of the various foreign Academies at the inaugural function. This publication was to have been released coinciding with her attending the Anniversary General Meeting of INSA as a Fellow on January 2, 1985 at Lucknow. Unfortunately fate willed otherwise and the most precious life of the nation was lost.

The Indian National Science Academy unanimously elected Shrimati Indira Gandhi as a Fellow of the Academy on October 1, 1984 but lost her within a month. To pay tributes to the memory of this great leader the scientific community including the Fellowship assembled in the Academy on 15 November, 1984.

The condolence meeting was presided over by Prof. A. K. Sharma, President of the

Academy and tributes were paid to Shrimati Gandhi by Prof. M. G. K. Menon (Immediate Past President), Dr. B. P. Pal, Prof. V. Ramalingaswami and Dr. Raja Ramanna (former Presidents of INSA). They recalled their personal experiences when they came in contact with this many splendoured personality whom one described as *Hominis maxima*—the maximum human being that can ever be. The tributes by five outstanding scientists of the country reflects how deep her interest was during the past two decades in promoting scientific and technological growth.

Prof. A. K. Sharma spoke of Shrimati Indira Gandhi's abiding interest and continued encouragement to Science and Technology in India and recalled that the INSA Council unanimously recommended her election to the Fellowship, which was endorsed whole heartedly by the Fellowship of the Academy and her election to the Fellowship was announced on 1 October, 1984. Prof. Sharma mentioned the progress made by the country since early 1960 and how from an food importing nation India has now become an exporter of food and is almost self reliant in



Shrimati Indira Gandhi is being escorted by Prof. A.K. Sharma (President) and officers to dais at Vigyan Bhawan



Shrimati Indira Gandhi presenting Golden Jubilee Plaque & Medal to Dr. K.R. Ramanathan, Foundation Fellow of the Academy.



Shrimati Indira Gandhi presenting Golden Jubilee Plaque to the President of the French Academy of Science, Prof. A. Blanc-Lapierre.

many industrial products. This achievement, though not projected much, has been primarily because of the technological progress achieved, based mainly on innovative talent and efforts of the country's own scientists. Her inspiring leadership has been the main factor in achieving self reliance in not only in agriculture and industry but also in different facets of scientific endeavour, in peaceful utilization of nuclear energy and its application, launching of satellites, expedition to Antarctica, advances in biological, medical and other branches of Science. Nowhere in the world, has Science and Technology received so much encouragement from the country's Prime Minister as has been received by Indian science from Shrimati Indira Gandhi and earlier from Pandit Jawaharlal Nehru. Her personal appeal, charisma, dynamic approach to all problems with humanism and deep involvement in conservation of nature made Indiraji dear to the scientific community. The Academy had the privilege to receive her unstinted support in all its activities. She personally awarded the Prizes to the INSA Young Scientists. Prof. Sharma specifically referred to the Golden Jubilee Celebrations of INSA which she had inaugurated and stated that her death is a tremendous loss not only to the Indian Science and India but also to humanity at large.

Prof. M. G. K. Menon expressed aptly his and the Fellowship's feelings that Indian Science has lost its 'Mother'. He elaborated the close relationship between Shrimati Indira Gandhi and the Indian scientific community. He said "Indira Gandhi: for scientists, technologists and engineers in India, the name evokes the vision of the mother and all that a mother stands for—of love and care; of protection and nurture; of an occasional scolding of a child who has not done well; with praise for achievement; the sense of pride and trust; and always an expression of the great expectations that a fond mother has of a child for fulfilment in the future. In the passing away of Indira Gandhi, Indian Science has truly lost its mother". Prof. Menon recalled her contribution in formulating the Technology Policy Statement and the detailed drafting she had done in her own hand.

In Technology Policy Statement she had indicated "Indian Science & Technology must

unlock the creative potential of our people and help in building the India of our dreams." Let Indian scientists make her dreams a reality.

Dr. B. P. Pal recalled an event when Shrimati Gandhi visited the Academy in 1976 to participate in the 1500th Anniversary Celebration of Aryabhata. Dr. Pal like every one else, was very much impressed by the learned speech delivered by her on the occasion. Dr. Pal said, he was astonished when he learnt that a good part of the speech was drafted by her after going through relevant material supplied. Such was her capacity to go into details and in acquiring new knowledge. Dr. Pal also recalled her immense concern for the preservation of environment, ecological balance and sense of artistic and aesthetic beauty. Recalling her urge for aesthetic beauty and orderliness he mentioned that how once while listening to an address by the then Foreign Secretary of the Academy she was rearranging the roses in the vase as she liked tidiness and beauty. These qualities do illustrate many facets of her personality.

Dr. Raja Ramanna paid glowing tributes to this friendly, affectionate humane personality who visited the Bhabha Atomic Research Centre on October 8, 1984 to see for herself some of the significant developments which have taken place at Trombay. On the very day she visited Trombay, the BARC had lost a renowned physicist Dr. Satyamurthy. Bringing this to her notice Dr. Ramanna said to her that he had passed away, but the world must go on. Shrimati Gandhi while returning from BARC in the car recalling the demise of the physicist said that there is a good French expression for this—"It is we who pass away but the world carries on". He also mentioned how she had the capacity to look at problems in a dispassionate manner without losing proper perspectives and human values. In conclusion Dr Ramanna said that the Academy has lost one of the greatest academicians.

Prof. V. Ramalingaswami too, mentioned her keen concern for improving the health of the people and in deriving maximum benefits not only from the modern medicines but also in utilizing fully the therapeutic properties of traditional medicine. He recalled her reaction after her two-hour visit to ICMR in April,



Shrimati Indira Gandhi with participants of the Global Seminar on "Role of Scientific and Engineering Societies in National Development"—1980.

1983. After listening to various presentations of Indian scientists she stressed the need to make concerted efforts to find cheaper therapeutic measures for ameliorating the ailments of our people, using genetic techniques for the benefit of mankind (and not as a means of making a few rich, richer) and spreading basic knowledge about hygiene, sanitation and nutrition right from the kindergarten stage. She was extremely gratified with the progress being made in developing vaccines for Leprosy and Tuberculosis. Shrimati Gandhi was a firm believer and had abiding faith in utilizing science as a tool for achieving technological revolution for meeting the challenges of the 21st century.

Dr. T. N. Khoshoo spoke of her abiding interest in conservation of nature which culminated in the creation of the Department of Environment.

Prof. P. N. Tandon read out the condolence messages received from premier Scientific Academies of the world. Messages were received from the American Association

for the Advancement of Science, the Norwegian Academy of Sciences, the Royal Society of London, the USSR Academy of Sciences and many renowned scientists from the world over.

Finally, **Prof. H. Y. Mohan Ram**, Convener of Delhi Chapter, read out the condolence resolution as follows :

"The Indian National Science Academy expresses its deep shock and anguish at the sudden and tragic death of Smt. Indira Gandhi, who steered India as Prime Minister for over 16 years with courage, sincerity and dedication. National development and global peace were her main concerns. Her extraordinary personality was a blend of ancient philosophy and wisdom of India and modern rationality and faith in science.

All the major scientific activities in the country received Smt. Indira Gandhi's unswerving support and encouragement.

She gave the highest priority to eradication of poverty, self-reliance in technology and self-sufficiency in food production. Her pivotal

role in encouraging teaching and research in natural sciences and engineering, investigations in health and application of family welfare principles, expansion of oil and mineral production, implementation of atomic energy programmes, exploration of the icy continent of Antarctica, utilisation of non-conventional energy resources, protection of environment and conservation of nature, initiation and intensification of space research programmes and launching of indigenously designed satellites for remote sensing and applications relating to education, telecommunication, radio and television has been principally responsible for the preeminence of India in the developing world.

In recognition of Smt. Indira Gandhi's abiding interest and support to Indian science, the Indian National Science Academy unanimously elected her a Fellow at the General Body Meeting on October 1, 1984. Smt. Indira Gandhi was requested by the President of the Academy to accept the Fellowship and sign the obligation form. In her personal communication of October 12, 1984 addressed to Academy's President, she expressed her thanks for the honour bestowed on her, sent the signed obligation form and agreed to attend the Anniversary

General Body Meeting to be held at Lucknow on January 2, 1985. Fate willed otherwise and the Academy was deprived of this unique honour. Nevertheless the Academy was fortunate that Smt. Indira Gandhi inaugurated its Golden Jubilee Celebrations on January 16, 1984.

Since the dawn of independence, Indian science and scientific community have been privileged to receive special consideration first from Jawaharlal Nehru and later from his illustrious daughter Smt. Indira Gandhi both of whom were elected Fellows of the Academy.

The Academy records its deep indebtedness to Smt. Indira Gandhi and sincerely hopes that the supreme sacrifice made by her will foster peace and goodwill and unite the country's rational and progressive forces in building India of her dreams.

The Academy and the scientific community wish to assure their continued unstinted services to the nation in its developmental activities."

This was fully endorsed by the audience of eminent Scientists.



Condolence meeting in the Academy to mourn the death of Shrimati Indira Gandhi.

THE COUNCIL—1985



Professor C. N. R. Rao
President



Professor A. K. Sharma
Immediate Past President



Professor R. R. Daniel
Vice-President



Dr. S. Z. Qasim
Vice-President



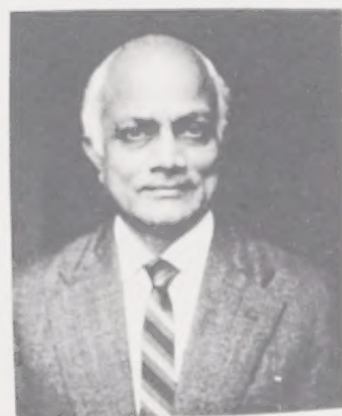
Professor P. N. Srivastava
Treasurer



Dr. T. N. Khoshoo
Foreign Secretary



Professor S. K. Joshi
Secretary



Professor H. Y. Mohan Ram
Secretary



Professor A. N. Mitra
Editor of Publications



Dr. G. S. Venkataraman
Editor of Publications

Members of the Council



Professor U. C. Agarwala



Professor T. N. Ananthakrishnan



Professor J. Barnabas



Professor D. P. Burma



Professor S. Chandrasekhar



Professor (Mrs.) Asima Chatterjee



Dr. L. K. Doraiswamy



Professor V. K. Gaur



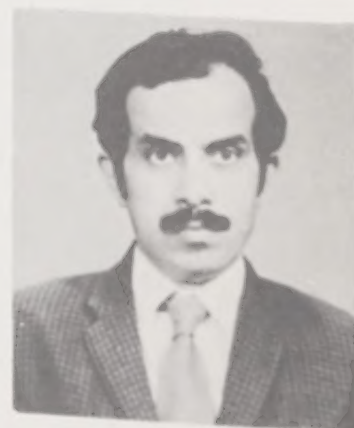
Professor A. Ghosh



Professor K. S. Gill



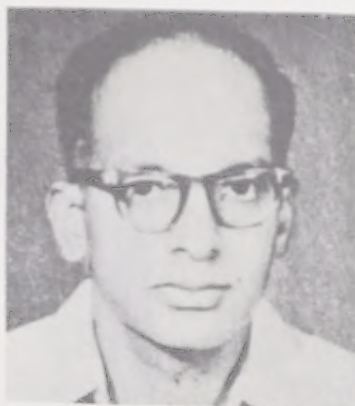
Professor N. Gopinath



Professor R. Narasimha



Professor K. R. Parthasarathy



Professor M. S. Raghunathan



Dr. P. Rama Rao



Dr. (Mrs.) K. J. Ranadive



Professor K. S. Valdiya



Professor K. N. Mehrotra
Representative of NAS,
(India) Allahabad

**DR. S. VARADARAJAN, FNA, HAS DONATED Rs. 20,000/-
TOWARDS INSA GOLDEN JUBILEE FUND**

IMPORTANT DECISIONS OF THE COUNCIL MEETING HELD ON 1 OCTOBER 1984

Science Academy Medals for Young Scientists

The council decided that the Nomination Form shall accompany 15 copies of the list of Publications and 2 sets of reprints.

INSA Golden Jubilee Research Professorship—1985

The Council appointed a Committee consisting of Professors C. N. R. Rao, M. G. K. Menon, V. Ramalingaswami and Dr. B. P. Pal to scrutinise nominations invited in 1984 and recommend the name of the scientist for the award.

Awards due for 1985

The Council recommended that the nominations for the various awards for 1985 be invited from the Fellowship alone.

INSA Research Professorships

The Council decided that the INSA Research Professorship for the year 1986 will be called as the "INSA Chandrasekhara Venkata Raman Research Professorship" and for 1987 the "INSA Satyendra Nath Bose Research Professorship."

INSA S. N. Bose Young Scientist Medal

To commemorate the 60th Anniversary of the Bose Statistics, the Academy has instituted a one time award of a bronze medal and Rs.5,000/-. The INSA S. N. Bose Young Scientist Medal will be awarded to Dr. S. D. Mathur of Tata Institute of Fundamental Research, Bombay at the inauguration of the Indian Science Congress Session at Lucknow on 3 January 1985.

AWARDS AND HONOURS



Professor V. L. Chopra, FNA, Professor of Genetics, Indian Agricultural Research Institute, New Delhi, has been awarded the Borlaug Award for 1983.



Prof. N. B. K. Nair, FNA, has been nominated as the Vice-Chairman of the State Committee on Science, Technology and Environment of the Government of Kerala.



Dr. B. Choudhury, FNA, Head, Division of Vegetable Crops and Floriculture, Indian Agricultural Research Institute, New Delhi, has been awarded the Aisman Award for 1983.



Dr. G. N. Ramachandran, FNA, INSA Albert Einstein Centenary Research Professor, has been chosen for the Rameshwardas Birla Smarak Kosh National Award for 1984-85.



Dr. A. P. Mitra, FNA, Director, National Physical Laboratory, New Delhi, has been elected President of the International Union of Radio Science (URSI) for 1984-87.



Dr. B. Ramamurthi, FNA, Head, Department of Neurosurgery, Dr. Achant Lakshmipathi Neurosurgical Centre, Madras, has been Conferred an honorary Fellowship of the International College of Surgery.



Dr. S. S. Kapoor, FNA, Head, Vande Graff Lab., Bhabha Atomic Research Centre, Bombay, has been awarded the Shanti Swarup Bhatnagar Prize for Physical Sciences for 1983.



Prof. O. Siddiqi, FNA, Professor of Molecular Biology, Tata Institute of Fundamental Research, Bombay, has been awarded the D. Sc. degree (h.c.) by the Aligarh Muslim University, Aligarh.



Dr. V. V. R. Vardachari, FNA, Director, National Institute of Oceanography, Goa, has been re-elected Vice Chairman of the Committee on Climatic Changes and the

FASAS ACTIVITIES

First Council Meeting—4 December 1984 at Kathmandu (Nepal)

The first Council Meeting of the FASAS was held at Kathmandu on 4 December 1984 on the invitation of the Royal Nepal Academy of Science & Technology (RONAST) synchronising with its Second Anniversary held from 5-6 December 1984. The Royal Nepal Academy of Science & Technology, during its second Anniversary, also organised a Symposium on 'Planning Science & Technology for National Development'. The symposium was inaugurated by the Prime Minister of Nepal, Shri Lokendra Bahadur Chand. In his inaugural address he mentioned that inspite of the rich heritage and tradition in Science and Technology in the region, our peoples could not maintain the tempo and have not been in the mainstream of scientific and technological development. However, now there is an increasing realisation in Asian countries of the important role of Science and Technology in national development and the Governments of the region are paying adequate attention for creating necessary Science and Technology infrastructure and training of personnel.

His Majesty Sh. Birendra Bir Bikram Shah Dev, the King of Nepal who is also the Chancellor of the Royal Nepal Academy of Science & Technology attended a reception hosted in his honour by the Prime Minister who is also the ex-officio Pro-Chancellor of RONAST. On this occasion, His majesty granted audience to representatives of different scientific societies and academies of Asian countries participating in the FASAS Council meeting.

The FASAS Council meeting was attended by Prof. A. K. Sharma (India), President; Prof. Yan Dongsheng (China), Vice-President; Dr. M. K. Rajakumar (Malaysia), Secretary; and Presidents from other scientific societies and academies of Thailand, Philippines, Nepal, Bangladesh and Afghanistan. The Vice President of Singapore Academy of Sciences and Scientific Secretary of COSTED also attended. The President of the Sri Lanka Academy of Sciences and also the President of the Pakistan Academy of Sciences could

not attend. The FASAS Council expressed satisfaction that a Workshop on 'Enzyme Engineering' has been successfully held recently at Indian Institute of Chemical Biology, Calcutta and was attended by participants from China, Bangladesh, Malaysia and Thailand. The Council decided that the following workshops-cum-training programmes be organised by various scientific societies and academies of the region:

1. Training Programme on 'Use of Photo voltaic System for Energy Application, Bangalore—India (4-8 March 1985); at Bangkok, Thailand (6-10 May 1985) and at Kuala Lumpur, Malaysia (11-15 May 1985);
2. Workshop-cum-Training Programme on 'Technology and Processing of Palm Oil-Malaysia (November-December 1985)
3. 'Pharmacological techniques for Evaluation of Midicinal Plants', Central Drug Research Institute, Lucknow;
4. 'Micro-computers-Interfacing to Instruments'—Singapore (May 1985);

5. 'Alternate Energy Avenues for Rural Areas' China,
6. Symposium on 'Biotechnology'—Bangladesh (October 1985)

The Council also decided to publish a quarterly newsletter from its Headquarters. It also felt that there is a need to bring out an "Asian Science Digest" which may highlight achievements of the region in popular language. The Council also agreed to yearly membership fee of us \$ 100 for the year 1985 and thereafter US \$ 200 per year.

FASAS members also participated in the RONAST Symposium on 'Planning Science & Technology for National Development' and highlighted the achievements of their respective countries. The second Council Meeting of the FASAS will be held at Kuala Lumpur from 3-5 December 1985 synchronising with a Seminar on 'Technology for Rural Development' being organised by Malaysian Scientific Society.



FASAS Council Meeting held in Kathmandu on 4 December, 1984

RESEARCH PROJECTS

Marine Archaeological Investigations in Indian Waters

Under the Basic Sciences Programme the Academy supported a Research Project on "Marine Archaeological Investigations in Indian Waters" with Dr. S. R. Rao as the project leader. The studies, carried out for 3 years from 1981-84 at Marine Archaeology Unit of the National Institute of Oceanology, Goa, envisaged prospecting for and retrieving ancient shipwrecks and exploring and excavating historically significant ports which were submerged by the sea.

The investigation discovered structural remains of a Late Harappan-cum-post-Harappan Port-town (BDK-I) submerged by the sea in Beyt Dwarka island on Gujarat coast. This is the first ever attempt at systematic underwater archaeological excavation in the country. Indian divers employed for the purpose unearthed pottery and other antiquities with the help of airlifts and were also able to photograph the excavation technique. Between a massive stone wall *in situ* on the wavecut bench of the intertidal zone on the one hand and the rubble wall in the cliff section on the other, building blocks of disturbed structures were found associated with waverolled pottery of proto-historic period which is assignable to the 15th-14th centuries B. C. on the basis of

1 BC dates of id. ... Prabhās, Roṭaḍi etc. in Gujarāt. ... dishes, troughs and dish on stand in the ... Ware of Late Harappan fabric and sh... of the Lustrous Red Ware bowl were found in Beyt Dwarka. A coppersmith's stone used for casting spearheads of different size was another important finding. Large

quantities of conch-shell bangles, ladles and unguent vessels in various stages of manufacture found here suggest a flourishing shell-working industry.

Small trial trenches sunk in the seabed at 5 to 6 m water depth brought to light a compact habitation deposit underlying 1m thick loose clayey sediment. The sediment covered structural remains can be identified. Scientific equipment such as the side-scan sonar, subbottom profiler etc., are made available. Deeper digging in a large area will be necessary to determine the extent of the submerged town. The operation has given a datum line for eustatic studies. When the seawall was built on the wavecut bench the sea level must have been 1 to 1.5 metre below the bench. At present, the wall lies at 3.6m water depth at highest high water indicating 4.6 to 5 metre rise in sea level since the midsecond millennium B.C., which corresponds to the second Holocene transgression in Bahrain Island calculated by Jansen and others.



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INTERNATIONAL SYMPOSIUM ON BIOLOGICAL MONITORING OF THE STATE OF THE ENVIRONMENT (BIOINDICATORS) OCTOBER, 1984 AT INSA, NEW DELHI

The International Union of Biological Sciences (IUBS) decided at its XXI General Assembly held in Ottawa in 1982 to initiate a world-wide programme for identifying and applying biological indicators in environmental monitoring specially to evaluate the effect of hazardous substances.

IUBS constituted an International Steering Committee and an Advisory Board chaired by Prof. J. Salanki, Vice-President of the IUBS.

Under this programme an "International Symposium on Biological Monitoring of the State of the Environment" has been organised by INSA in association with the Department of Environment, Govt. of India. The symposium was co-sponsored by the UNESCO, COSTED and the International Union of Biological Sciences (IUBS) and held in the premises of the Academy from 11-13 October, 1984.

Prof. A. K. Sharma, President, Indian National Science Academy in his inaugural address mentioned that replacement of chemicals by biological mechanisms in human

activities offered the hope of preserving the environment. He graphically described the consequences of indiscriminate uses of chemicals as growth prohibited factors in biosphere adversely affecting ecological balance and thus threatening mankind's survival. The replacement of chemical fertilizers by biofertilizers, of pesticides and insecticides with bio-control mechanism and of fossil fuel by biomass were recommended to reverse this process. Professor J. Salanki, in his key-note address, referred to various natural bioindicators which helped to monitor the pollution caused in the environment. Dr. T. N. Khoshoo, who presided, mentioned that the Department of Environment would soon launch an all India coordinated project to deal with all aspects of environmental pollution. The project would involve experts who would assess pollution levels in different parts of the country and advise the centres or others responsible for the pollution and how to curb it.

The three day symposium covered the biomonitoring aspects of air, water, soil and aquatic environment. About a dozen invited speakers from abroad, who are the members of the IUBS Biomonitoring Steering Committee and half a dozen Indian scientists discussed the different aspects. The symposium provided a forum for global exchange of views on the subject and stressed the practical use of biomonitors in assessing the health of the environment. The recommendations of the symposium are now being considered by the Department of Environment.



Prof. A.K. Sharma, President, inaugurating the Bioindicator Symposium

GLOBAL SEMINAR CONTINUING COMMITTEE MEETING, 5-6 NOVEMBER 1984 AT RINGBERG CASTLE, REPUBLIC OF GERMANY

ISCA-INSNA-AAAS Global Seminar on 'Role of Scientific and Engineering Societies in National Development' held at New Delhi in December 1980 set up a Continuing Committee with a view to establish strong linkages between the scientific and engineering societies of developed and developing countries. The 1981 and 1983 meetings of the Continuing Committee were held in New Delhi. The 1984 meeting was hosted by Deutsche Forschungs-gemeinschaft Wissenschaftliche Auslandsbeziehungen.

The Continuing Committee consists of Prof. A. K. Sharma and Mr. E. Q. Daddario as Co-chairmen and representatives of scientific

and engineering societies from Western Europe, Eastern Europe, Middle-East, Latin America, South-East Asia, China, Africa, USSR and India. The 1984 meeting was held at Tegernsee Lake at Ringberg Castle near München on 5-6 November, 1984. Prof. (Mrs.) Archana Sharma, representing the Indian Science Congress Association attended the meeting. The two-day meeting reviewed the progress made on the various projects identified in earlier meetings. A few new research areas were outlined to explore the possibility of collaboration between the scientific societies in the developed and developing countries.

On the recommendations of the Global Seminar Continuing Committee, various joint workshop on 'Bio-medical equipment maintenance service programme', 'Firewood production and management', 'Biomedical engineering', 'Neural transplants', 'Microcomputers and data bases and "Climate & Food" will be organised in India.

FORTHCOMING MEETINGS

VII International Conference on Positron Annihilation, 6-11 January, 1985 at New Delhi.

Convener: Dr. P. C. Jain, Department of Physics & Astrophysics, University of Delhi, Delhi.

Asian Congress on Pharmacology, 15-19 January, 1985 at New Delhi.

Convener: Dr. B. N. Dhawan, Chairman, Central Drug Research Institute, Lucknow

Second International Conference on Computer Aided Analysis and Design in Civil Engineering, 29 January to 2 February, 1985 at Roorkee.

Convener: Dr. Prem Krishna, Chairman, Civil Engineering Department, University of Roorkee, Roorkee.

Workshop on Neurolinguistics, January 1985 at Mysore.

Convener: Dr. Prathibha Karanth, Reader Speech Pathology, All India Institute of Speech & Hearing, Mysore.

International Workshop on Data Processing for Developing Countries (IIG) January, 1985

Convener: Dr. R. G. Rastogi, Director, Indian

Institute of Geomagnetism, Bombay.

International Symposium on Radioactivity, January 1985 at Pune

Convener: Prof. H. J. Arnikar, Department of Chemistry, University of Poona, Pune.

National Symposium on Newer Trends in Synthetic Heterocyclic Chemistry, 6-9 February, 1985 at Jaipur.

Convener: Prof. K. C. Joshi, Department of Chemistry, University of Rajasthan, Jaipur.

National Symposium on Photon-Induced Processes in Chemical and Biological Systems, 14-16 February, 1985 at Varanasi.
Convener: Professor Suresh Chandra, Professor of Physics, Banaras Hindu University, Varanasi.

National Seminar on Solid State Physics, 14-17, February, 1985 at Calcutta.
Convener: Dr. A. S. Divatia, Director, VEC Centre, Jadavpur, Calcutta.

National Symposium on Recent Trends in Instrumental Methods of Analysis, 21-23 February, 1985 at Roorkee.
Convener: Dr. S. N. Tandon, Professor & Head, Department of Chemistry, University of Roorkee, Roorkee.

Workshop of Exchange of Experiences in Operational Applications of Mathematical Models in Hydrology in Developing Countries, 26 February to 1 March, 1985 at New Delhi

Convener : Prof. Subhash Chander, Civil Engineering Department, Indian Institute of Technology, Hauz Khas, New Delhi.

International Symposium Cum-workshop on Iodin Nutrition, Thyroid Hormones and Brain Development, 3-8 March, 1985 at New Delhi.

Convener : Dr. N. Kochupillai, Assistant Professor of Medicine, Department of Medicine, All India Institute of Medical Sciences, New Delhi.

International Conference on Environment Education, 4-9, March, 1985 at New Delhi.

Convener : Dr. Desh Bandhu, School of Planning and Architecture, I. P. Estate, New Delhi.

International Workshop on Optical Communication, 7-12 March, 1985 at Madras.

Convener : Dr. Ashok Jhunjhunwala, Assistant Professor, Department of Electrical Engineering, Indian Institute of Technology, Madras.

Symposium on Tree Biology, March, 1985 at New Delhi.

Convener : Professor H. Y. Mohan Ram, Department of Botany, University of Delhi, Delhi.

LIST OF FELLOWS ELECTED 1984

(Effective from 1 January 1985)

Smt. Indira Gandhi,*
Prime Minister of India
1 Safdarjang Road, New Delhi

Shri J. R. D. Tata,
Chairman, Tata Sons Ltd.,
Bombay House, 24, Homi Modi Street,
Fort, Bombay

Professor G. S. Agarwal,
School of Physics,
University of Hyderabad,
Hyderabad

* Since deceased

Dr. P. Balaram,
Molecular Biophysics Unit,
Indian Institute of Science,
Bangalore

Professor B. N. Das,
Department of Electronic and Electrical
communication Engineering,
Indian Institute of Technology,
Kharagpur.

Dr. B. A. Dasanacharya,
Nuclear Physics Division,
Bhabha Atomic Research Centre,
Bombay

Dr. B. L. Deekshatulu,
National Remote Sensing Agency,
Department of Space, Hyderabad

Dr. P. D. Dogra
National Botanical Research Institute,
Lucknow.

Professor A. Gnanam,
Department of Plant Sciences,
Madurai Kamraj University,
Madurai.

Dr. R. S. Kapil,
Central Drug Research Institute,
Lucknow

Professor C. P. Malik,
Botany Department,
Panjab Agricultural University,
Ludhiana.

Professor P. T. Manoharan,
Department of Chemistry,
Indian Institute of Technology,
Madras

Dr. S. K. Mukherjee,
Central Drug Research Institute,
Lucknow.

Professor G. Padmanabhan,
Department of Biochemistry,
Indian Institute of Science,
Bangalore

Dr. R. Parthasarathy,
School of Mathematics,
Tata Institute of Fundamental Research,
Bombay

Dr. S. Rajappa,
Hindustan CIBA-GEIGY Research Centre,
Bombay

Professor R. Rajaraman,
Centre for Theoretical Studies,
Indian Institute of Science,
Bangalore

Professor Rajinder Kumar,
Department of Chemical Engineering,
Indian Institute of Science,
Bangalore

Professor P. V. Ramanamurthy,
Tata Institute of Fundamental Research,
Bombay

Professor Ram Udar,
Department of Botany,
University of Lucknow,
Lucknow

Professor R. V. Gopala Rao,
Department of Physical Chemistry,
Jadavpur University,
Calcutta

Dr. P. Ramachandra Rao,
School of Materials Sciences and Technology,
Banaras Hindu University,
Varanasi

Professor G. M. Reddy,
Department of Genetics,
Osmania University,
Hyderabad

Dr. C. R. R. M. Reddy,
Department of Pathology,
Andhra Medical College,
Visakhapatnam.

Dr. V. C. Shah,
School of Sciences,
Gujarat University,
Ahmedabad

Professor M. S. Srinivasan,
Department of Geology,
Banaras Hindu University,
Varanasi

Professor Krishna Swarup,
Department of Zoology,
Gorakhpur University,
Gorakhpur

Dr. H. D. Tandon,
Department of Pathology,
All India Institute of Medical Sciences,
New Delhi.

Professor R. K. Varma,
Physical Research Laboratory,
Navrangpura,
Ahmedabad

Dr. J. N. S. Yadava
Division of Microbiology
Central Drug Research Institute,
Lucknow.

LIST OF SCIENTISTS ELECTED TO FOREIGN FELLOWSHIP 1984.

(Effective from January 1, 1985)

Dr. Bernard L. Horecker
Roche Institute of Molecular Biology Nutley,
New Jersey (USA)

Professor George W. Housner
California Institute of Technology, Pasadena,
California (USA)

Professor Sir Andrew Huxley
University College,
London

Professor Cho Hao Li
University of California,
San Francisco (USA)

Professor C. Ladd Prosser
University of Illinois,
Urbana, (USA)

Professor John M. Thomas
University of Cambridge,
Cambridge (UK)

For Information :

Telex No. "31-61835 INSA IN" has been installed in the
Academy.

OBITUARY



Dr. N. S. Satyamurthy born on 5 February 1936 died in Bombay on 8 October 1984 at the age of 48. A specialist in Solid State Physics and Neutron Scattering, he was elected to Fellowship of the Academy in 1981. He was Associate Director, Physics Group, Bhabha Atomic Research Centre Bombay



Dr. T. Ramachandra Rao born on 9 October 1907 died in Bangalore on 8 November 1984 at the age of 77. A specialist in Medical Entomology/Virology, he was elected to Fellowship of the Academy in 1957. He was formerly Director, Virus Research Centre (presently known as National Institute of Virology) Pune. He was awarded the Sisir Kumar Mitra Memorial Lectureship of the Academy in 1978.



Dr. S. Ramanuam born on 25 January 1925 died at New Delhi on 10 December 1984 at the age of 59. A specialist in Genetics and

Plant Breeding, he was elected to Fellowship of the Academy in 1983. He was Head of the Department of Genetics, Indian Agricultural Research Institute, New Delhi.

Dr. P. A. M. Dirac died on 20 October 1984 at the age of 82. A specialist in Atomic Physics and Wave Mechanics, he was elected to Foreign Fellowship of the Academy in 1947. He won the Nobel Prize for Physics in 1933.

MINUTES OF THE ORDINARY GENERAL MEETING HELD ON 4 AUGUST, 1984 AT INSA, NEW DELHI.

Fellows present

Professor A. K. Sharma, *President*
Dr. S. Sriramachari, *Vice-President*
Professor D. Lal, *Foreign Secretary*
Professor U. Aswathanarayana
Dr. P. Bhattacharya
Professor D. P. Burma
Dr. B. Chowdhury
Professor H. C. Gangulee
Professor K. S. Gill
Dr. P. K. Iyengar
Professor K. N. Mehrotra
Professor S. N. Mitra
Dr. Dinesh Mohan
Dr. B. P. Pal
Professor R. K. Pal
Dr. A. S. Paintal
Professor S. S. Prihar
Professor R. P. Roy
Professor V. Sasisekharan
Professor (Mrs.) Archana Sharma
Professor H. S. Sohi
Professor P. N. Srivastava
Professor W. D. West
Professor P. N. Tandon, *Secretary*

Condolence on the passing away of the following esteemed Fellows.

The General Body noted the sad demise of the following esteemed Fellows :

Shri S. L. Malurkar passed away on 26 April 1984

Prof. K. B. Madhava passed away on 26 April 1984

Dr. A. N. Khosla passed away on 29 May 1984

Prof. S. S. Joshi passed away on 24 July 1984

Dr. G. S. Mahajan passed away on 26 July 1984

All the Fellows present in the meeting stood in silence for a minute as a mark of respect to the deceased.

Confirmation of the minutes of the Ordinary General Meeting held on 5 May 1984.

Professor P. N. Tandon read the minutes of the Ordinary General Meeting of the Academy held on 5 May 1984 at the National Chemical Laboratory, Pune. This was confirmed.

Admission of Fellows under Rule 13

The following were admitted to the Fellowship under rule 13. They were introduced to the membership by those whose names are shown against them :

<i>Name</i>	<i>Introduced by</i>
Prof. Dinesh Mohan	Prof. S. N. Mitra
Prof. S. S. Prihar	Prof. K. S. Gill
Prof. H. S. Soni	Prof. P. N. Mehra

The newly inducted Fellows received their scrolls from the President and signed the register.

To read as required under Rule 45 (c) the names of candidates for consideration for election to Fellowship

The name of Professor D. Banerjee whose nomination was received for consideration for election to Fellowship of the Academy under Sectional Committee-III was read by Professor P. N. Tandon, Secretary.

Announcement of names of scientists selected for the award of Science Academy Medals for Young Scientists 1984

The name of fifteen selected for the award of Science Academy Medals for Young Scientists for the year 1984 were announced by Professor P. N. Tandon, Secretary. (list alongwith citation appeared in Oct., 1984 issue of INSA News)

Presentation of the J. C. Bose Medal-1983 to Professor V. Sasisekharan, FNA.

The J. C. Bose Medal-1983 was presented to Professor V. Sasisekharan, FNA

Professor Sasisekharan delivered a lecture on 'History of Left Handed DNA' at 5.15 p.m. on Friday, the 3 August 1984.

Presentation of the D. N. Wadia Medal 1983 to Professor W. D. West, FNA.

The D. N. Wadia Medal-1983 was presented to Professor W. D. West, FNA, a Foundation Fellow of the Academy.

Professor West delivered a lecture on 'The Deccan Trap and other flood eruptions: a comparative study' at 4.00 p.m. on Saturday, the 4 August 1984.

The President thanked the Fellowship and declared the meeting as closed.

MINUTES OF THE 50TH ANNUAL GENERAL MEETING HELD ON 1 OCTOBER, 1984 AT INSA, NEW DELHI.

Fellows Present

Professor A. K. Sharma, *President*

Prof. J. C. Ahluwalia

Dr. V. S. Arunachalam

Prof. J. Barnabas

Prof. D. S. Bhakuni

Prof. O. P. Bhutani

Prof. Madhav Gadgil

Dr. P. K. Iyengar

Prof. A. C. Jain

Prof. S. K. Joshi

Prof. A. Mani

Prof. H. Y. Mohan Ram

Dr. B. P. Pal

Prof. B. L. S. Prakasa Rao

Dr. R. Ramanna

Prof. S. R. V. Rao

Prof. (Mrs.) Archana Sharma

Prof. P. N. Srivastava

Prof. E. C. Subba Rao

Prof. K. S. Valdiya

Dr. S. Varadaraian

Dr. A. R. Verma

Condolence on the passing away of the following esteemed Fellows of the Academy.

The death of Professor N. K. Sen and Dr. Bhabesh Chandra Roy were condoled. All present in the meeting stood in silence for one minute as a mark of respect to the deceased.

Confirmation of the minutes of the Ordinary General Meeting held on 4 August 1984.

The minutes of the Ordinary General Meeting held on 4 August 1984, read by Professor S. K. Joshi (Secretary) were confirmed.

Admission of Fellows under Rule 13

Professor M. D. Gadgil was introduced by Professor H. Y. Mohan Ram and admitted to Fellowship of the Academy under Rule 13. He received the scroll and signed the register.

Scrutiny of voting papers for the election of Officers and members of the Council for the year 1985 and announcement of the result.

The President nominated Dr. D. S. Bhakuni, Professor O. P. Bhutani, Professor A. C. Jain and Dr. J. C. Ahluwalia as scrutineers and election to INSA Council 1985.

Announcement of the result of scrutiny of voting papers for special election of Fellows (under rule 7 (e))

The special election of Smt. Indira Gandhi and Shri J. R. D. Tata to the Fellowship of the Academy under Rule 7 (e) was announced.

Announcement of the result of the scrutiny of voting papers for election of Fellows 1984.

The election of Fellows of the Academy was announced (page 16)

Announcement of the result of the scrutiny of voting papers for election of Foreign Fellows 1984

The election of Foreign Fellows of the Academy was announced. (page 17)

Presentation of the Meghnad Saha Medal 1984 to Dr. R. Ramanna, FNA.

The Meghnad Saha Medal 1984 was presented to Dr. Raja Ramanna, FNA by the President, Professor A. K. Sharma

Dr. Raja Ramanna delivered the Medal Lecture on 'A 15 Year Programme for Nuclear Power in India' at 4.00 p.m. on 1 October 1984 at the Academy.

Announcement of the Award of INSA Endowment Lectureships

The awards of INSA Endowment Lectureships 1985 were announced :

i) Professor T. S. Sadasivan Endowment Lecture—Professor R. Misra, FNA (ii) Dr. Har Swarup Memorial Lecture—Dr. M. L. Roonwal, FNA (iii) Professor R. K. Asundi Memorial Lecture—Dr. G. Herzberg (iv) Professor B. D. Tilak Lecture—Professor A. B. Joshi, FNA.

Announcement of the award of INSA Golden Jubilee Biren Roy Trust Fellowship-1985.

The award of INSA Golden Jubilee Biren Roy Trust Fellowship-1985 to Dr. Bhaskar Datta, Fellow, Indian Institute of Astrophysics, Bangalore was announced.

Announcement of the award of INSA Research Fellowship-1985.

The award of INSA Research Fellowships-1985 to Dr. P. K. Basu and Dr. V. Ramamurthy were announced.

Announcement of the awards under INSA Senior Scientists Scheme-1985

The awards under INSA Senior Scientists Scheme Prof. Dinesh Mohan, Prof. S. N. Ghosh, Dr. N. A. Narasimham, Dr. Nitya Nand, Prof. S. Santappa, Prof. J. J. Shah and Prof. C. V. Subramanian were announced.

Announcement of the nomination of representative of Cooperating Academies on Council 1984.

The nomination of Prof. K. N. Mehrotra, FNA as representative of the National Academy of Sciences, India, on the Council of the Indian National Science Academy for 1985 was announced.

Presentation of the report of the Council for the Year 1983-84

A gist of the report of the Council was presented by Professor S. K. Joshi, Secretary.

Review of the work of the Academy by the President

The President reviewed the work of the Academy. (The Presidential remarks are already appeared in Oct. 1984 issue).

Submission by the Secretary of the list of Fellows corrected up-to-date.

The Secretary, Professor S. K. Joshi submitted a list of Fellows, corrected upto 1 October, 1984. He mentioned that there are 503 Fellows as on that date. A copy of the list would be available in the library and

further updated version would be printed in the Year Book 1985

To read as required under Rule 45 (c) the names of candidates for consideration of election to Fellowship

Professor S. K. Joshi, Secretary, INSA read the name of Dr. Ashok Kumar Mukherjee whose nomination paper was received on 11 Sept. 1984. He has been proposed by Professor J. C. Bhattacharya for consideration (in Sec. Committee-V) for election to Fellowship.

ANNOUNCEMENT

Academy provides partial financial assistance for the participation in the important international conferences held abroad, deputation under the exchange programmes with the Academies of U.K., USSR, Hungary, Poland, Norway, France, Philippines and Japan; seed money for the research projects (young scientists below the age of 40 years); financial assistance for the research programmes/compilation on History of Sciences in India and also for the organisation of conferences, symposia, seminars, etc. Scientists desirous of availing the facilities of the above programmes may obtain the application forms and other details from the Executive Secretary, Indian National Science Academy, Bahadur Shah Zafar Marg, New Delhi-110 002.

MISCELLANEOUS

SUBJECT WISE COMPOSITION OF THE INSA FELLOWSHIP—A Study

B. D. Ukhal & Manju Kant, INSA Library

The Beginning

The Fellowship of the INSA initially started with 124 Foundation Fellows instead of the earmarked 125. Their subject split up is as follows. It may be interesting to note that the Academy Committee during 1934, while recommending intake of 100 Foundation Fellows had also prescribed the quota of Fellows in various disciplines and the same is also being mentioned below for sake of reference. (Later, this number was revised from 100 to 125)

Subject	No. of Foundation Fellows	%	% fixed by the Academy Committee
Mathematics	11	9	9
Physics	14	11	15
Chemistry	19	15	16
Med. & Vet Sc.	20	16	16
Zoology & Anthropology	10	8	8
Botany	12	10	8
Agriculture	15	12	8
Geology	15	12	8
Engineering	8	7	6
Unattached	—	—	6

This is only to illustrate that at the very beginning all the subjects were not evenly represented and the quota was obviously determined on the basis of the strength or merit of the respective discipline. Subsequently as per the rules of the Academy, there was an annual intake into the Fellowship, whose number was revised from 10 to 15 in 1941 and from 15 to 30 in 1977. The subject areas under the purview of the Academy were initially covered by the following 8 sectional Committees.

S.C. I	Mathematics
S.C. II	Physics
S.C. III	Chemistry
S.C. IV	Engineering
S.C. V	Geology
S.C. VI	Botany
S.C. VII	Zoology
S.C. VIII	Physiology & Med. Sc

In 1962, the IXth Sec. Committee of 'Biochemistry' was added and in 1976 the

subject of 'Agriculture' was introduced as Sectional Committee X.

Sectional Committee-Wise Strength of Fellowship-Overall View

In this study, it has been endeavoured to reveal the pattern of intake of the Fellowship in the subject represented by various Sectional Committee. Starting from the Foundation year, the elected Fellowship has been correlated to their respective Committee subjects in that year and the analysed data is given in table 1.

It will be seen that since the foundation of the Academy, 922 Fellows have been elected out of which 4 were elected under Rule 7 (e). As on 1 Jan., 1985 the number of existing Fellowship is 528. In the following table, Sectional Committee-Wise strength of the Fellowship elected so far alongwith their percentages is given in comparison with the existing Fellowship.

Sec. Committee	Total Fellowship elected since inception		Existing Fellowship as on 1.1.1985	
	No. of Fellows	Percentage	No. of Fellows	Percentage
I	80	9.0	45	8.5
II	123	13.0	81	15
III	133	14.5	79	15
IV	87	9.5	52	10
V	103	11.0	48	9.0
VI	87	9.5	52	10
VII	71	8.0	39	7.5
VIII	115	12.5	55	10.5
IX	39	4.0	35	6.5
X	80	9.0	42	8
Total	918	100	528	100

No. of Fellows elected under Rule 7 (e) : 4

The variation in percentage is noted in various disciplines in the above table and this of course has been continuing since the foundation of the Academy.

Relationship between the Nominations and Actual Elections

The relationship between the number of nominations under consideration for election to Fellowship and the number of Fellows elected under the respective Sectional Committees is interesting.

A Sectional Committee-Wise comparative table of the average percentages of the valid nominations vis-a-vis the elections for the years 1981-1985 is as follows :

Sectional Committee	Average Percentage	
	Nominations	Fellows Elected
I	6	6
II	14	14
III	14	15
IV	11	10.5
V	11	8
VI	9	13
VII	9	8.5
VIII	10	7.5
IX	5	8.5
X	11	9

The above indicates that the trend of election has been more or less in consonance with the number of nominations under consideration under various Sectional Committees.

Year-wise data for 1981 to 1985 of the nominations under consideration alongwith the figures of elected under the respective Sectional Committees is given in the table 2 & 3.

Subject-wise Composition of the Council

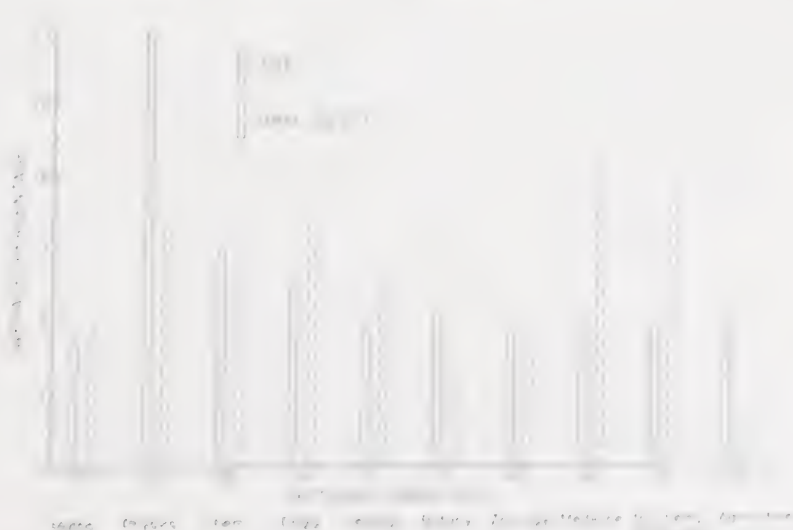
A study of the INSA Council's structure based on the subjects represented by its members for the decade (1975-1984) has also been made. In order to have an idea about the council of the Royal Society, the corresponding exercise was undertaken for that society also. The Royal Society has presently 11 Sectional Committees against 10 Sectional Committees of INSA. The Subject covered by the Royal Society were transformed into the pattern of INSA Sectional Committees wherever required for the sake of this study. Sectional Committee I

to VII in INSA and the Royal Society represent almost the same subjects, while S.C. VI in the Royal Society includes Applied Plant sciences also, which part is in S.C. X of INSA. S.C. VIII of INSA corresponds to S.C. X of the Royal Society. S.C. IX of INSA is found distributed among S.C. VIII & IX of the Royal Society. S.C. XI of the Royal Society is given to 'Genetics' while INSA has in all only 10 Sectional Committees.

The analysed data for the decade 1975-1984 of the councils of the INSA and the Royal Society (after transforming the members to their disciplines on the pattern of INSA Sectional Committees) is tabulated in table 4 & 5. The average representation of the subjects on percentage basis has been worked out for this decade as follows :

Sectional Committees	Average Percentage	
	INSA	Royal Society
I	7.0	7.5
II	24.0	13.0
III	12.0	11.0
IV	10.0	13.5
V	7.5	10.0
VI	8.5	4.5
VII	7.5	7.0
VIII	8.0	16.5
IX	7.5	15.0
X	8.0	2.0

In INSA Council 'Physics' (S.C.II) tops the average percentage followed by 'Chemistry' (S.C.III) whereas in the case of the Royal Society 'Medicine' (S.C.VIII) is at the top followed by 'Biochemistry/Biophysics' (S.C.IX). A graphical study of the comparison is as follows.



Sectional Committee-wise Representation on Council of INSA & Royal Society, 1975-1984

Table 1
YEARWISE ANALYSIS OF INTAKE OF FELLOWSHIP IN VARIOUS SECTIONAL COMMITTEES

Year of Election	I Maths	II Physics	III Chemistry	IV Engg & Tech	V Earth Sciences	VI Plant Sciences	VII Animal Sciences	VIII Medical Sciences	IX Biochemistry/Bio physics	X Agricultural Sciences	Total
F.F.*	11	14	19	8	15	10	10	19	7	15	124
1935	1	4	8	1	7	2	1	3	1	2	26
1936	1	2	5	0	2	0	2	2	0	1	11
1937	1	4	1	1	0	2	1	1	0	0	10
1938	1	0	2	1	3	1	1	0	0	1	10
1939	1	2	0	1	2	1	2	2	0	0	11
1940	1	2	2	0	2	0	1	1	1	2	10
1941	1	1	2	0	2	1	0	3	0	2	14
1942	1	4	4	0	3	0	0	1	0	2	13
1943	0	0	4	0	3	1	1	5	0	1	14
1944	1	2	1	1	0	1	0	4	0	2	14
1945	1	2	1	0	2	2	1	2	0	0	13
1946	1	2	2	2	2	0	0	2	1	4	15
1947	2	0	0	0	0	0	0	0	0	0	0
1948	0	2	0	0	1	1	2	2	0	1	15
1949	0	1	2	2	1	1	2	1	0	2	15
1950	1	1	0	2	1	1	0	1	3	3	15
1951	2	2	1	1	1	1	0	4	0	2	14
1952	2	1	0	1	2	2	1	2	0	2	13
1953	0	1	2	1	1	2	2	2	0	0	14
1954	1	1	2	2	3	1	0	0	0	3	15
1955	2	1	2	2	3	2	1	2	0	0	15
1956	1	1	3	1	2	2	1	2	1	1	15
1957	2	2	2	1	2	2	2	1	1	0	15
1958	0	1	1	2	1	1	2	3	1	0	15
1959	2	0	2	2	0	2	0	2	0	0	13
1960	2	2	1	1	3	1	1	2	0	0	13
1961	1	2	3	2	2	1	2	0	0	1	14
1962	1	2	2	1	1	1	2	2	1	1	13
1963	1	2	1	1	1	0	1	3	1	1	13
1964	1	2	1	0	0	1	0	1	0	0	5
1965	0	0	0	0	0	0	0	0	0	0	0
1966	1	2	2	2	1	1	0	3	0	3	15
1967	1	1	2	0	0	0	0	1	0	0	5
1968	1	1	2	2	1	2	1	1	1	0	13
1969	1	1	2	1	0	1	0	3	1	0	10
1970	0	2	2	1	1	2	1	0	0	0	9
1971	1	2	2	1	0	1	1	1	1	0	10
1972	0	2	2	2	2	2	1	3	0	1	15
1973	1	2	1	1	1	1	1	2	2	0	15
1974	2	2	2	2	2	0	1	3	0	2	15
1975	2	1	1	1	0	2	2	1	0	1	15
1976	2	1	1	2	2	1	1	1	2	0	15
1977	1	1	1	1	4	2	2	3	3	2	20
1978	1	2	1	1	3	1	1	1	2	3	20
1979	1	2	1	1	3	1	1	1	3	2	20
1980	1	1	1	1	3	1	1	1	3	2	20
1981	1	1	1	1	3	1	1	3	2	3	20
1982	1	2	1	1	4	1	1	3	2	2	20
1983	1	1	1	1	3	1	1	0	1	2	20
1984	1	1	1	1	3	1	1	2	1	3	20
1985	1	1	1	1	1	1	2	1	3	1	20
Total	80	124	122	85	103	82	75	115	59	80	818
Percentage	20	13.4	14.7	9.5	11.0	9.4	8.7	12.5	4.0	9.0	100

*Founders Fellows

Fellow elected under Rule 1 (e)

(1975-76) - 2000-01 - 1-2

(1984-85)

Table 2
SECTIONAL COMMITTEE-WISE NOMINATIONS UNDER CONSIDERATION FOR
1980—1984

Year	I	II	III	IV	V	VI	VII	VIII	IX	X	Total
1980	31	57	67	42	40	36	38	31	16	44	402
1981	30	57	64	48	45	38	42	38	16	52	430
1982	25	55	56	46	40	39	40	41	19	47	408
1983	23	66	55	45	49	41	34	47	22	42	424
1984	24	67	52	45	52	43	35	53	27	39	437
Average %	6.0	14.0	14.0	11.0	11.0	9.0	9.0	10.0	5.0	11.0	100

Table 3
SECTIONAL COMMITTEE-WISE ELECTION TO THE FELLOWSHIP FOR THE YEAR
1981—1985

Year	I	II	III	IV	V	VI	VII	VIII	IX	X	Total
1981	2	4	5	3	4	4	1	3	2	2	30
1982	3	2	4	2	3	4	3	0	4	2	27
1983	2	4	4	4	3	3	4	2	1	3	30
1984	1	5	5	2	1	4	2	3	3	4	30
1985	1	5	4	4	1	4	2	3	2	2	28
Average %	6	14	15	10.5	8.0	13.0	8.5	7.5	8.5	9.0	100

Nominations for 1980 correspond to the elected Fellowship for 1981 & so forth.

Table 4
YEARWISE REPRESENTATION OF SUBJECTS ON THE COUNCIL OF THE
INDIAN NATIONAL SCIENCE ACADEMY

Year	I	II	III	IV	V	VI	VII	VIII	IX	X	Total
1975	2	9	3	4	2	2	2	—	2	2	28
1976	1	10	3	3	2	1	2	1	2	3	28
1977	2	6	5	2	2	2	2	2	3	2	28
1978	2	6	3	2	2	2	3	3	2	3	28
1979	3	5	3	2	2	2	2	3	2	3	27
1980	2	6	2	3	3	2	2	3	2	3	28
1981	2	7	3	2	2	3	2	3	2	1	27
1982	2	6	4	3	2	3	2	3	2	1	28
1983	2	5	4	3	2	4	2	2	2	2	28
1984	2	6	4	3	2	3	2	2	2	2	28
Average %	7	24	12	10	7.5	8.5	7.5	8	7.5	8	100

Table 5
YEARWISE REPRESENTATION OF SUBJECTS ON THE COUNCIL OF THE
ROYAL SOCIETY OF LONDON

Year	I	II	III	IV	V	VI	VII	VIII	IX	X	Total
1975	1	3	1	3	2	1	2	1	5	2	21
1976	1	3	3	4	2	1	2	2	3	—	21
1977	1	3	3	4	2	1	—	3	4	—	21
1978	2	3	2	3	2	1	—	5	3	—	21
1979	2	3	3	3	2	1	2	4	2	—	21
1980	2	2	3	3	2	1	2	4	2	—	21
1981	2	2	2	3	2	—	2	5	3	—	21
1982	2	3	2	2	2	—	1	4	4	1	21
1983	2	4	2	2	2	1	2	3	4	—	21
1984	1	2	2	2	3	1	2	4	2	1	21
Average %	7.5	13	11	13.5	10	4.5	7	16.5	15	2.0	100

INSA LIBRARY

BOOKS ADDED DURING JANUARY—SEPTEMBER, 1984

(Entries under Prominent Subject Headings have been kept in the classified sequence so that books on specific field are listed close to each other)

SCIENCE GENERAL

- MESSEL, H. Ed. : Science update. Sydney, Pergamon Press, 1983.
- BOYLE, C. et al. Ed. : People, Science & Technology : A Guide to advanced industrial society. Brighton, Sussex, Wheatsheaf Book Ltd., 1984.
- THE ILLUSTRATED ENCYCLOPEDIA OF SCIENCE AND THE FUTURE. New York, Marshall Cavendish, 1983. 20 Vols.
- INDIAN NATIONAL SCIENCE ACADEMY : Address by Presidents 1935-1984. New Delhi, INSA, 1984.
- INDIAN NATIONAL SCIENCE ACADEMY : Medal Lectures 1950-1983. New Delhi, INSA, 1984. 2 Vols.
- INDIAN NATIONAL SCIENCE ACADEMY : Science in India. Ed. by S. K. Mukherji & B. V. Subbarayappa. New Delhi, INSA, 1984.
- McGRAW HILL YEARBOOK OF SCIENCE & TECHNOLOGY 1984. New York, McGraw Hill Book Co., 1984.
- SCIENCE OF THE TIMES : The New York Times Survey. Ed. by Arleen Keylin. New York, Arno Press. Vol. 3. (1980) & Vol. 4 (1981)
- RITTBERGER, Volker Ed. : Science and Technology in a changing International order : The United Nations Conference on Science & Technology for Development. Boulder, Westview Press, 1982.
- CAZENAVE, Michel : Science and consciousness : Two views of the Universe. Tr. by A. Hall & E. Callander. Oxford, Pergamon Press, 1984.
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- MARKS, John : Science and the Making of the Modern World. London, Heinemann Educational Books, 1983.
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- HALL, A.R. : The Revolution in Science 1500-1750. London, Longman, 1983.
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- PANDIT, G.L. : The structure and growth of scientific knowledge : A study in the methodology of epistemic appraisal. Dordrecht, D. Reidel Pub. Co., 1983.
- RUSE, M. Ed. : Nature Journal. Historical and philosophical case studies in Greek Medicine, Nineteenth Century and recent Biology, Psychiatry, and Psychoanalysis. Dordrecht, D. Reidel Pub. Co., 1983. Vol.2.
- MEDAWAR, P.B. : Advice to a Young Scientist. London, Pan Books, 1979.

BIOGRAPHY

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1	Annual subscription due	
2	Meeting of the Council, Anniversary General Meeting	Lucknow "
March		
26	Meeting of the National Committee for ICSU	INSA, New Delhi
April		
19	Meeting of the Sectional Committee	INSA, New Delhi
20	Meeting of the Sectional Committee (Contd.)	"
May		
3	Meeting of the Council	Bombay
4	Meeting of the Council (Contd.) Ordinary General Meeting	" "
July		
1	Last date for receipt of suggestions for filling up the vacancies in the Council and Sectional Committees.	
August		
2	Meeting of the Council	Bangalore
3	Meeting of the Council (Contd.) Ordinary General Meeting	" "
October		
1	Meeting of the council Annual General Meeting	INSA, New Delhi "
November		
15	Last date for receipt of nominations for consideration of election to Fellowship 1986 and Science Academy Medals for Young Scientists 1986.	